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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,862	09/15/2000	Shinichi Kurita	004946	4206

7590 12/13/2001

Patent Counsel MS/2061
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EXAMINER

BOOTH, RICHARD A

ART UNIT PAPER NUMBER

2812

DATE MAILED: 12/13/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/663,862

Applicant(s)

KURITA ET AL.

Examiner

Richard A. Booth

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 18-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of group I in Paper No. 3 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2 and 12-13 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Hofmeister, U.S. Patent 6,318,945 B1.

Hofmeister shows the invention as claimed including a load lock chamber 16 with a double dual slot load lock constructed at a same location for a multi-chamber apparatus (see Figures 2-3 and column 2, line 62 – column 3, line 57).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmeister, U.S. Patent 6,318,945 B1 in view of Ghanayem et al., U.S. Patent 6,106,634.

Hofmeister is applied as above but lacks anticipation of a heating or a cooling means within the loadlock chamber.

Ghanayem et al. discloses that the entry loadlock chamber can be used to perform certain processing steps involving heat and using heating plates (see column 6, lines 21-56). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate heating plates into the primary reference of Hofmeister because this will allow for beneficial effects to the process. Furthermore, a heating plate could also be adjusted by the temperature to be a cooling plate. In addition, the examiner also takes official notice that gases can also be used for a heating or cooling effect (see, for example, U.S. Patent 6,034,000 at column 5, lines 48-55).

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmeister, U.S. Patent 6,318,945 B1 in view of Iwai et al., U.S. Patent 5,562,383.

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Hofmeister shows the invention as claimed but lacks anticipation of flip type doors or valves being used between the load lock and transfer chambers.

Iwai et al. discloses using a flip type door 346 which securely closes a chamber through which a number of semiconductor wafers are placed (see Figure 25 and column 33, line 65 – column 34, line 23). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a flip type door in the primary reference of Hofmeister to isolate the transfer chamber from the load lock chamber because this is an effective means of sealing the chambers off from one another, as shown by Iwai et al.. Regarding the use of flip type valves, the examiner takes official notice that it is well known in the art to substitute doors for valves and vice versa in multi-chamber apparatus configurations.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmeister, U.S. Patent 6,318,945 B1 in view of Maydan et al., U.S. Patent 5,224,809.

Hofmeister is applied as above but lacks anticipation of having a filter system in the load lock chamber.

Maydan et al. discloses a filtering system which is used to remove particulates from the load lock chamber (see column 13, line 61 – column 15, line 35). In view of this disclosure, it would have been obvious to one of ordinary skill in the art to incorporate a filtering system in the primary reference of Hofmeister because this will reduce the contamination during the process.

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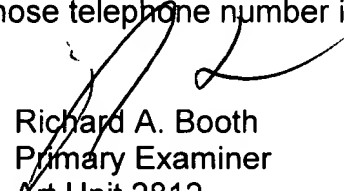
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A. Booth whose telephone number is 308-3446. The examiner can normally be reached on Monday-Thursday from 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on 308-3325. The fax phone numbers for the organization where this application or proceeding is assigned are 308-7724 for regular communications and 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1782.



Richard A. Booth
Primary Examiner
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